NC/QC/DD-MW-13/2018-19/SN-W1

Date: 08-03-2019

TEST REPORT ON WET MIX MACADAM MIX
(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.
{Name of work: Improvements of Asphalting At 6th,7th And Others Roads Santhoshnagara in Mallasandra Ward No 13 Shettyhalli Sub Division.}

Ref.: Material testing/QC/18-19,

Report Required for: Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M/s Technical Manager (West), KRIDL.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, V Revision-2013
53.00	100.00	100
45.00	98.65	95-100
26.50	---	-
22.40	72.15	60-80
11.20	47.90	40-60
4.75	28.45	25-40
2.36	19.80	15-30
0.600	12.30	8-22
0.075	4.05	0-5

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KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore

Proprietor

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Date: 08-03-2019

TABLE 1.2

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)– 1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**27.40 %**	Not more than 30.00 %
2.	Combined Flakiness and Elongation index, %	**28.35%**	Not more than 35.0 %
3.	Water absorption, %	**0.40 %**	Not more than 2.0 %
4.	Plasticity Index, %	**NP**	Not more than 6.0 %

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ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

K. R

KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore

Proprietor

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NC/QC/DD-MW-13/2018-19/SN-W2

Date: 11-03-2019

TEST REPORT ON WET MIX MACADAM MIX
(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.
{Name of work: Improvements of Asphalting At 6th,7th And Others Roads Santhoshnagara in Mallasandra Ward No 13 Shettyhalli Sub Division.}

Ref.: Material testing/QC/18-19,

Report Required for: Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M/s Technical Manager (West), KRIDL.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, V Revision-2013
53.00	100.00	100
45.00	97.55	95-100
26.50	---	-
22.40	69.10	60-80
11.20	56.40	40-60
4.75	38.65	25-40
2.36	22.95	15-30
0.600	16.50	8-22
0.075	3.45	0-5

AE

KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore

Proprietor

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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Date: 11-03-2019

TABLE 1.2

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)– 1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**26.50 %**	Not more than 30.00 %
2.	Combined Flakiness and Elongation index, %	**27.85%**	Not more than 35.0 %
3.	Water absorption, %	**0.39%**	Not more than 2.0 %
4.	Plasticity Index, %	**NP**	Not more than 6.0 %

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KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore

Proprietor

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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NC/QC/DD-MW-13/2018-19/SN-BD1 **Date: 15-03-2019**

1. TEST REPORT ON BITUMEN SAMPLE:

Sub: Testing of Bitumen sample VG-30 Grade used in Dense Graded Bituminous Macadam.
{Name of work: Improvements of Asphalting At 6th,7th And Others Roads Santhoshnagara in Mallasandra Ward No 13 Shettyhalli Sub Division.}

Ref.: Material testing/QC/18-19,

Report Required for: Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M/s Technical Manager (West), KRIDL.

Technical Reference: Ministry of Road Transport and Highways, V Revision, 2013 and IS 73: 1992.

TABLE 1.1 ;

SL No	Details	Test Results	Requirements as per I.S 73 –1992 Specifications
1.	Penetration at 25^0 C	**52.90^0 C**	Min. 45
2.	Ductility Value at 25^0 C	**117 cm**	40
3.	Flash point	**246^0 C**	Minimum 220^0 C
4.	Softening point	**51.10^0 C**	Min. 47

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KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore

Proprietor

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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NC/QC/DD-MW-13/2018-19/SN-CD1

Date: 15-03-2019

1. TEST REPORT ON COARSE AGGREGATE:

Sub: Testing of Coarse Aggregate used in Dense Graded Bituminous Macadam.
{Name of work: Improvements of Asphalting At 6th,7th And Others Roads Santhoshnagara in Mallasandra Ward No 13 Shettyhalli Sub Division.}
Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Technical Manager (West), KRIDL.

TABLE 1.1 ;

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)– 1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	26.05%	Not more than 27.00 % for DBM
2.	Combined Flakiness and Elongation index, %	27.40%	Not more than 35.0 %
3.	Water absorption, %	0.38 %	Not more than 2.0 %
4.	Specific gravity	2.60	-------
5.	Soundness	6.67 %	Max. 12 % in Sodium Sulphate

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KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore
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NC/QC/DD-MW-13/2018-19/SN-DM1 Date: 18-03-2019

1.TEST REPORT ON BITUMINOUS MIXES :
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for DBM mix sample.
{Name of work: Improvements of Asphalting At 6th,7th And Others Roads Santhoshnagara in Mallasandra Ward No 13 Shettyhalli Sub Division.}
Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Technical Manager (West), KRIDL.

TEST RESULTS

A. Type of Construction : **Dense Graded Bituminous Macadam.**
1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **4.50 %**

2. **Gradation Test**
TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-10 of MORTH Specfications-2013 DBM (Grading - 2)
37.5	100	100
26.5	97.90	90-100
19.0	81.55	71-95
13.20	74.70	56-80
4.75	41.25	38-54
2.36	36.40	28-42
0.300	18.05	7-21
0.075	6.35	2-8

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ಮಲ್ಲಸಂದ್ರ ರಸ್ತೆ, ರಮಣಶ್ರೀ ಬಡಾವಣೆ, ಬೆಂಗಳೂರು

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KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore

Proprietor

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NC/QC/DD-MW-13/2018-19/SN-DS1 Date: 19-03-2019

1.TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for DBM mix sample.
{Name of work: Improvements of Asphalting At 6th,7th And Others Roads Santhoshnagara in Mallasandra Ward No 13 Shettyhalli Sub Division.}
Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Technical Manager (West), KRIDL.

TEST RESULTS

Table 1: Properties of DBM (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Dense Bituminous Macadam, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
	Marshall Stability (75 blows) At 60°C, kgs.	1236	900
	Marshall Flow at 60°C, mm.	3.24	2.0 - 4.0

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ಎಸ್.ಎಂ. ರಸ್ತೆ, ಮಲ್ಲೇಶ್ವರಂ

K...R
KIRAN. R
M.E, (Civil-Engg)

For Newzen Consultants Bangalore

Proprietor

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

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